



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Lin *et al.*

Serial No. 09/837,797

Filed: April 17, 2001

For: **METHODS OF DIAGNOSING AND TREATING SMALL INTESTINAL BACTERIAL OVERGROWTH (SIBO) AND SIBO-RELATED CONDITIONS**

Examiner: Swartz, R. P.

Art Unit: 1645

DECLARATION OF DR. MARK PIMENTEL

UNDER 37 C.F.R. § 1.132

1. I, Mark Pimentel, residing at 9805 Burgen Avenue, Los Angeles, CA 90034, declare that I have personal knowledge of the facts averred herein.

2. I am a named co-inventor of the invention described and claimed in U.S. Patent Application Ser. No. 09/837,797 for **METHODS OF DIAGNOSING AND TREATING SMALL INTESTINAL BACTERIAL OVERGROWTH (SIBO) AND SIBO-RELATED CONDITIONS**, filed on April 17, 2001. In addition, Dr. Henry C. Lin, residing at 868 Third Street, Manhattan Beach, CA 90266, is a named co-inventor of the aforementioned patent application. Together Dr. Pimentel and I are the sole inventors of the claimed invention.

3. The above-captioned application demonstrates, *inter alia*, enablement for a method of treating a SIBO-caused or SIBO-associated condition in a human subject, including a condition selected from the group consisting of impaired mentation and impaired memory, which are some of a number of conditions caused by small intestinal bacterial overgrowth (SIBO). In Examples 1-6, Applicants have demonstrated that SIBO is associated in patients with, e.g., irritable bowel syndrome, fibromyalgia, chronic fatigue syndrome, systemic lupus erythematosus, multiple sclerosis, depression, attention deficit/hyperactivity disorder, autism, impaired mentation, impaired memory, drug sensitivity, an autoimmune disease and Crohn's disease, and that at least partial *eradication of the SIBO results in improvement in symptoms* of these various *SIBO-caused conditions*.

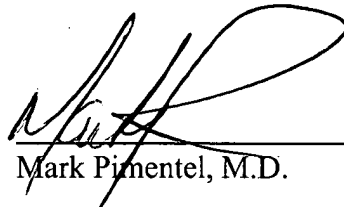
4. Specifically, with regard to impaired mentation and impaired memory associated with SIBO, I have personal knowledge of two patients whose SIBO-associated mentation and/or

memory impairments were markedly ameliorated by virtue of the claimed method. In accordance with rules established by the Cedars-Sinai Medical Center Institutional Review Board (IRB), these patients are identified below only by Patient ID No. Those rules prohibit the submission of original patient records but allow me to state the following brief summaries:

(a) Patient 2: a 22-year old male presented on Dec. 9, 2002 with impaired short term memory, impaired ability to concentrate, myalgia, arthralgia, fatigue, sleepiness that had been diagnosed as narcolepsy and postprandial bloating and poorly localized periumbilical pain. He had an abnormal lactulose breath test on May 8, 2002, indicating the presence of SIBO. The patient was treated with Vivonex Plus, a comestible total enteral nutrition formulation (i.e., with a so-called "elemental diet"), for 14 days. He returned for examination after completing the elemental diet for a repeat lactulose breath test on Feb. 21, 2003, which was normal, indicating at least the partial eradication of the SIBO condition. Correspondingly, the patient reported during a follow-up consultation on Feb. 26, 2003 dramatic improvement of his symptoms. Specifically, he reported being able to think much more clearly and could read faster with good retention. He also reported improved energy. On a follow-up visit dated March 26, 2003, the patient reported being able to think far more clearly on Vivonex. He also felt more stable and had a sense of well being on the elemental diet. His friends and family have also noted that he is talking and articulating more clearly;

(b) Patient 3: 52-year old male presented on June 28, 1999 with a greater than 30-year history of impaired ability to concentrate, fatigue, irritability, sweating, chronic bloating, excessive flatus and cramping poorly localized abdominal pain. He had an abnormal lactulose breath test on June 25, 1999, indicative of small intestinal bacterial overgrowth. He was treated first with antibiotics to successful eradication. When he was found to have a recurrence documented by an abnormal lactulose breath test on Jan. 23, 2002, the patient opted for treatment with a comestible total enteral nutrition formulation (i.e., with a so-called "elemental diet"; Vivonex Plus) treatment for 14 days. A repeat lactulose breath test dated Feb. 5, 2002, was normal, showing at least partial eradication of SIBO. He reported feeling better, after the treatment with elemental diet. Correspondingly, the patient reported dramatic improvement of his ability to concentrate, recovery of his short term memory, restoration of his energy level and elimination of his GI symptoms. He has also noted a change in his personality with a reduction in his irritability.

5. These facts confirm the enablement of the claimed invention, as disclosed in the above-captioned application.



Mark Pimentel, M.D.

7/9/03
Date

Director, GI Motility Laboratory

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